

IN THE CLAIMS

1. (Previously Presented) A system for creating signals indicative of a graphical user interface from wide-angle image data corresponding to a monitored area, said system comprising:
 - a buffer configured to receive wide-angle image data corresponding to the monitored area; and
 - a processor operably coupled to said buffer and configured to:
 - generate, from the buffered wide angle image data, panoramic view data of a panoramic view of the monitored area;
 - generate, from the buffered wide-angle image data virtual view data representing a virtual view of a portion of the panoramic view; and
 - encode the panoramic view data and the virtual view data for display.
2. (Original) A system according to claim 1, further comprising:
 - a user input module configured to provide user command data to said processor; and
 - said processor being further configured to determine the virtual view data based on the user command data.
3. (Original) A system according to claim 2, wherein the processor is further configured to determine reference data corresponding to an area in the panoramic view represented by the virtual view.
4. (Previously Presented) A system according to claim 2, further comprising a first video camera system having a first video camera operably coupled to said buffer and said processor, said first video camera system operable to generate wide-angle image data.
5. (Previously Presented) A system according to claim 4, wherein said first video camera system includes a fisheye lens.

6–8. Cancelled.

9. (Previously Presented) A system according to claim 4, further comprising:
a second video camera system operably coupled to said buffer and said processor, said second video camera system having a second video camera and being configured to aim the second video camera at a portion of the monitored area according to pan, tilt and zoom command data, and configured to capture video image data; and
wherein the processor is further configured to communicate pan, tilt and zoom command data to cause the first video camera system to aim the first video camera at the monitored area; and
wherein captured video image data from the second video camera is included in the virtual view.

10. Cancelled.

11. (Previously Presented) A system according to claim 4, wherein the system transforms wide-angle image data received by the buffer into virtual view data corresponding to the virtual view and into panoramic view data corresponding to the panoramic view in real time.

12. (Previously Presented) A system according to claim 2, further comprising a display device operably coupled to said processor to display the panoramic view and the virtual view.

13. Cancelled.

14. (Previously Presented) A system according to claim 12, further comprising at least one reference window overlaid on at least one portion of the panoramic view, each overlaid portion defining the portion of the panoramic view to which the virtual view corresponds, and the at least one reference window having a size and a position determined according to the user command data.

15. (Previously Presented) A system according to claim 14, wherein:
- the panoramic view includes a first panoramic view and a second panoramic view, the first panoramic view corresponding to a first portion of the monitored area, and the second panoramic view corresponding to a remaining portion of the monitored area;
 - the virtual view includes a first virtual view and a second virtual view, the first virtual view corresponding to a first portion of the first panoramic view, and the second virtual view corresponding to a second portion of the second panoramic view; and
 - a combination of the first panoramic view and the second panoramic view provide a 360° view of the monitored area relative to a vertical axis.
16. (Previously Presented) A method of generating a graphical user interface, said method comprising:
- buffering wide-angle image data corresponding to a wide-angle image of a monitored area;
 - generating, from the buffered wide angle image data, panoramic view data of a panoramic view of the monitored area using a panoramic transformation, and;
 - generating, from the buffered wide-angle image data, virtual view data using a virtual view transformation, the virtual view data representing a virtual view of a portion of the panoramic view.
17. (Previously Presented) A method according to claim 16, further comprising:
- determining pan, tilt and zoom values;
 - determining a portion of the buffered wide-angle data to transform into virtual view data for the virtual view based on the pan, tilt and zoom values.
18. (Previously Presented) A method according to claim 17, further comprising determining reference data based on the pan, tilt and zoom values.
19. (Previously Presented) A method according to claim 18, wherein the buffered wide-angle data is received from a first video camera system, said methodology further comprising:

communicating pan, tilt and zoom commands to a second camera system; and
receiving virtual view data for the virtual view from the second camera system.

20. (Original) A method according to claim 16 further comprising encoding reference data, virtual view data and panoramic view data for output.

21. (Previously Presented) A system for creating signals indicative of a graphical user interface from wide-angle image data corresponding to a monitored area, said system comprising:

means for buffering wide-angle image data corresponding to the monitored area;
means for processing and generating, from said buffered wide-angle image data received from said storing means, panoramic view data of a panoramic view of the monitored area; and
means for processing and generating, from the buffered wide-angle image data, virtual view data representing a virtual view of a portion of the panoramic view.

22. Cancelled.

23. (Previously Presented) A system according to claim 14, wherein the size and the position of the at least one reference window determines pan, tilt and zoom values for the corresponding virtual view.

24. (Original) A system according to claim 15, wherein the at least one reference window is user-selectable for controlling the size and the position of the reference window to determine pan, tilt and zoom values for the corresponding virtual view.

25. (Previously Presented) A method according to claim 16, wherein the panoramic view includes:

a first panoramic view corresponding to a first portion of the monitored area;
a second panoramic view corresponding to a remaining portion of the monitored area;
and

the first panoramic view and the second panoramic view combine to provide a 360° view of the monitored area relative to a vertical axis; and

wherein said method further comprises encoding the first panoramic view, the second panoramic view, and virtual view of a portion of at least one of the first panoramic view and the second panoramic view for simultaneous display.

26. (Original) A method according to claim 17, further comprising:

determining a position and a size of at least one reference window positioned over the portion of at least one of the at least one panoramic view corresponding to the virtual view, the position and size defined according to user command data; and

wherein the pan, tilt and zoom values are based upon the position and the size of the at least one reference window.